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THE PROFESSIONAL GEOGRAPHER

ON EXPLANATION, MODEL, AND DESCRIPTION
F. Lukermann, *University of Minnesota*

ON BEHALF OF THE OLD LANTERN SLIDE
William D. Pattison, *University of California at Los Angeles*

MATHEMATICAL FORMULAS AND SLIDE RULE PROCEDURES FOR GRADUATING CIRCLES AND SPHERES
J. Sullivan Gibson, *University of North Carolina*

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COMMUNICATIONS FROM READERS

NEW PUBLICATIONS

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No. 1

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The Association of American Geographers
Phyllis R. Griess, Editor

Volume XII January 1960 Number 1

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Authors of articles must restrict the length of their manuscripts, including headings, line drawings and captions, tables, and footnotes, to an amount equivalent to six pages of this periodical. In order to facilitate maximum use of available space, authors of articles are requested to bracket in red pencil short passages which may, if necessary, be omitted by the Editor. A limited number of bibliographical footnotes is permitted with each article, but informational footnotes cannot be accepted. Footnotes should be placed at the end of the article, should be keyed into the article when necessary with numbers enclosed in parentheses, and should follow the style employed in this publication.

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All materials submitted for publication, and all books for review, should be sent to Dr. Phyllis R. Griess, Editor, The Professional Geographer, *Department of Geography, The Pennsylvania State University, University Park, Pa. The Editor and the Association of American Geographers assume no responsibility for statements or opinions expressed by contributors.*

THE PROFESSIONAL GEOGRAPHER

VOLUME XII JANUARY 1960 NUMBER 1

ON EXPLANATION, MODEL, AND DESCRIPTION

F. Lukermann
University of Minnesota

BRIAN BERRY would take me to task for writing that the use of "concepts of equilibrium, equipossibility, minimization of cost/effort, *et al.* . . . is invalid." (*1*) Fortunately, that is not what I wrote; nor what I believe. These concepts or models are certainly not invalid, *i.e.*, weak, feeble, or powerless. On the contrary, it would be difficult to conceive of more powerful or rigorous formulae to manipulate quanta. My argument was that the acceptance of these concepts and models by geographers "to interpret human behavior is certainly less than an empirical approach." (*2*) Within the context of the problem then under discussion – the transportation and circulation of persons, goods and services – how can this be denied? As a matter of fact, Mr. Berry is one of the few who have done this type of research and can speak *ex cathedra*, and whom I would have thought would support exactly such a conclusion. How can assumptions of perfect knowledge and pure competition, which are integral in these models, be considered as stemming from empirical observations of economic activity? The most careful studies now being published in this field, those of the Washington State Council for Highway Research by Garrison, Marble, Berry, *et al.*, take pains to point out the "unrealistic" nature of just such assumptions.

It would probably be considered "old hat" to cite the caustic comments of T. B. Veblen and G. Myrdal on the non-empirical nature of equilibrium concepts as applied to economic activity, but an extract from a more recent study may serve to illustrate my point:

> "Exact models of the type we have been discussing belong, of course, to the world of fiction. Nobody expects such models to depict accurately the facts we aim to 'explain.' If exact models are to be of practical value, it must be possible to add to them some reasonable interpretation of the deviations between the theory and the facts." (*3*)

In short, my argument is not against models or theories, mechanistic or stochastic, but in what manner they are used. What does it add, other than confusion, to call them empirical or empirically derived, when it is quite obvious they are not? It is particularly difficult to see how these models can be applied in geography along the lines suggested in Mr. Berry's comment.

Specifically I would question Mr. Berry's interpretation of the geographic meaning of explanation, model, and description. Or more precisely I would question his authorities. The meaning of these three words bears directly on the foregoing discussion of what is "less than an empirical approach."

Zetterburg is cited for the remark, "the quest for explanation is the quest for theory." (*4*) This is adequate as a gambit, but it is not quite clear whether this means that theory is explanation of reality. I would contend that a theory is only an explanation of its hypotheses and not of reality. If reality is the sum total of experience at any given time and place, how can theory, which is based on hypotheses formulated from *particular* instances or cases of experience, explain totality? Hypotheses derived from logical constructs, singular happenings or mean observations, as hypotheses of mechanistic/deterministic models are, surely cannot account for reality. Zetterburg eventually spells this out, but not in so many words: "*Explanation* is the demonstration that some recorded facts – for example, facts presented in a descriptive study – are accounted for or predicted by the hypotheses in a theory."(*4*) He cites not reality, not all facts, but just *some* facts; *particular* facts from which *particular* hyoptheses were constructed.

It follows that theories formulated from empirical studies do not explain or account

for reality. Certainly theories borrowed from physics and mechanics without reference to observations of human economic behavior cannot explain or account for reality.

Mr. Berry's contention that "a theory or model, when tested and validated, provides a miniature of reality . . ." seems to me, therefore, a misconception. It goes too far. A model has reference only to its hypotheses. It is not a miniature of anything; it is a logico-mathematical formulation of a specific set of hypotheses. Calling a model either a "miniature" or an "explanation" of reality contributes nothing to the issue at hand; the crucial problem is the construction of hypotheses from the empirical realities of economic geography. The selection of models is ancillary.

Because of the arguments given above, I would still contend that "a more geographic economic geography would start from observations with the recording of data on maps," and that "research in geography would begin with the description of geographic phenomena and associations so arranged and ordered." Mr. Berry says this is mere inventory, that what is needed is problem-orientation. Agreed, this is inventory, i.e., a registration, an accounting, a schedule of an itemized list of observations — in short, an ordered and associated group of observations fixed as to time and place. How else would one begin research, whether the object is describing reality or constructing hypotheses? Some years ago Professor Sauer put the question a little less categorically:

> "No field of inquiry can be properly defined by any specific means or methods of gaining knowledge. A person may devote himself to the mastery and use of a particular technique, but knowledge is eclectic and grows by using any means that add to understanding. Geography, for example, has a vested interest in what is called by everyone the 'geographic method.' In simplest terms, this is placing on a map the distribution or variation of anything that is spatially localized or varying. Geographers should be making more use of this method of inspection than they do, for many questions of distribution cannot be studied without it. I should not admit, however, as has been claimed, that all the data that concern geographers are mappable, or that their conclusions are necessarily derived therefrom. Therefore, I cannot agree that geographers can be recognized by their own method. Some can be, some good ones cannot be." (5)

Some may argue that this is not a particularly strong argument in favor of inventory. That is true, but what are the alternatives? Where to begin: by importing concepts from 17th century physics, by describing the world in *ceteris paribus* homiletics, by following a cart before the horse problem-orientation methodology? Agreeing with Professor Sauer that a discipline is not best defined by its tools, its method, or its content but rather by the questions it asks, I would only suggest that more geographic questions will be asked if the geographic method prescribed above is used; that more light is shed and less truth is sophisticated through inventory than through hunches.

* * *

(1) Berry, B. J. L., "Further Comments Concerning 'Geographic' and 'Economic' Economic Geography," *The Professional Geographer*, Vol. XI, No. 1, Part I, January, 1959, pp. 11-12.

(2) Lukermann, F., "Toward a More Geographic Economic Geography," *The Professional Geographer*, Vol. X, No. 4, July, 1958, p. 9.

(3) Haavelmo, T., "A Study in the Theory of Economic Evolution," *Contributions to Economic Analysis*, Amsterdam, 1954, pp. 64 ff.

(4) Zetterburg, H. L., *On Theory and Verification in Sociology*, Stockholm, 1954, pp. 9 and 10.

(5) Sauer, C. O., "Folkways of Social Science," *The Social Sciences at Mid-Century: Essays in Honor of Guy Stanton Ford*, University of Minnesota Press, Minneapolis, 1952, pp. 101-102.

ON BEHALF OF THE OLD LANTERN SLIDE

William D. Pattison
University of California at Los Angeles

ALTHOUGH photography's alliance with geography is perhaps stronger than ever before, the relationship has in recent years suffered one distinct loss. This has occurred with the passing from the geography classroom of the traditional, large (3¼ x 4 inch) lantern slides, with their photographs printed directly upon glass. Faced with competition from cheaper, lighter, and smaller slides of mounted film, the old glass slides have nearly ceased to be produced, and such collections as have survived in geography departments are to be found most often in dark corners and back rooms. These collections, when first approached, may be discouraging to contemplate, but special visits by the author to nearly a dozen departments have led him to believe that they are generally deserving of reappraisal, and that most of the collections across the country will be discovered to contain slides of definite archival worth.

Appreciation of the old slides is easily gained with a little patience, but one prevailing condition stands in the way. This is the order in which the slides are typically sorted, which is either regional or topical and in either case is disregardful of the slides' provenance. Such an order was well suited to original teaching purposes, but now, with more museum-like ends in view, the sources of the slides should be brought to the fore. Anyone attempting this, whether through a complete resorting according to source or through a slight reorganization within an existing order, will probably benefit from the following enumeration of the leading kinds of slide-origin to be anticipated in a geography collection.

Major American producers. There were about twelve of these, for all of whom slides of geographical interest represented only a small fraction of the total output. Some makers in this category, all plainly identified by label, were Keystone, McAllister, Rau, Thompson, Underwood, and White. One or another special point of interest tends to attach to each major producer; for example, Rau's slides are noteworthy as specimens of landscape composition, and the White slides are mostly dated on the label, facilitating then-and-now comparison of scenes. Abundant as the slides of the major manufacturers once were, they are rapidly disappearing. Only one of the producers named above, Keystone, remains in business, and at the Keystone factory not only is continued production along old lines negligible but preservation of the slides themselves is not practiced. Particularly recommended for saving as a unit, by whatever geography department may have it, is the once widely known "600 Set," made by Keystone, with its unusually interesting accompanying guidebook.

Major foreign producers. The slides of two foreign companies seem most likely to appear in American geography collections: E. A. Seemann of Leipzig and J. Levy of Paris. Generally speaking, Seemann slides loom large in departments which were expanding their collections in the 1920's, and Levy slides are to be found in departments tracing their ancestry back into teachers colleges of the 1880's and 90's. Both groups of slides are characterized by sharpness of reproduction.

Geographers as commercial photographers. Especially well worth watching for is the work of each of two men, both of them geologists by training and geographers by choice, D. W. Johnson and H. W. Fairbanks. Johnson's pictures appear under the imprint of Lawrence and Turpin, of Boston, whereas Fairbanks' slides appear under his own name, bearing labels in his own writing stamped with his home address, Berkeley, California. Any searcher is invited to compare the photographs of Johnson and Fairbanks, dating from the period 1900 to World War I, with similar transparencies by today's geographers, for effectiveness as illustrations of phenomena of physical geography.

Geographers as commercial editors. Once widely felt but now forgotten is the influence in the geography classroom exerted by R. S. Tarr, of Cornell, through his selection and organization of photographs from many sources for distribution in slide form through the Geography Supply Bureau, Ithaca, New York. The slides can be identified by their peculiar labels, each of which carries one or more test questions pertaining to the picture shown, and none of which bears the name of either editor or maker. They cover a broad range of subjects in physical and economic geography. A second geographer whose editing and compiling efforts are represented in slides that once enjoyed a wide sale is J. Paul Goode. Any slides found bearing the imprint of the Geographic Society of Chicago and pertaining to weather or climate are likely to be from an early teaching set assembled by Goode and accompanied by a book, perhaps the most detailed commentary ever prepared under American geographical auspices for the elucidation of photographic slides. (*1*)

Geographers as photographers producing only for local use. The collections of many geography departments will doubtless find their best claim to archival merit in slides of local origin. Such slides, representing the photographic work of a department's own staff, can comprise an instructive and enduring record of the teaching and research careers of their authors. They normally reflect the interests and travels of the men concerned, and tend to associate closely with their publications. Added interest attaches, of course, to slides contributing to the historical geography of a department's home area. To the knowledge of this writer, the collection best exemplifying the rich possibilities of purely non-commercial slides of personal origin is that left by Mark Jefferson to his department at Eastern Michigan State University.

Readers of this article, turning to their respective departmental collections, may discover that much of their holdings consists of nothing more than photocopies of book illustrations and other similar material. Desirable as these copy-slides may be for some purposes, they require separation from slides whose sources have been discussed above before an appreciation of the overall value of a collection can be established.

To conclude, there is the matter of color. As everyone knows, those cheaper, lighter, smaller slides, which have made practically every geographer his own slide source and have put departmental collections of the kind under discussion out of use, consist of color film. With our vision now accustomed to color photos, most of us are disappointed to find that the old glass slides are simply black and white prints, and we tend to be little consoled by the coloring which has been applied to many of them by hand. The hand-coloring of slide-prints, admittedly, is sometimes highly inaccurate; but on the other hand it varies greatly, and actually is capable of excelling color film. To carry the comparison further, it should be pointed out that images projected from color film are often less refined in detail than are projections from the old glass slides, and that color film is decidedly inferior to the traditional print on glass in permanence of picture. These facts notwithstanding, general preference for 35 mm color slides will, of course, continue. Persons of this preference who wish to avail themselves of the old collections without changing their slide size will be pleased to know, if they do not already, that glass lantern slides are convertible by easy photographic means into 35 mm transparencies.

* * *

(*1*) Cox, H. J. and Goode, J. P., *Lantern Slide Illustrations for the Teaching of Meteorology,* The Geographic Society of Chicago, Chicago, 1906.

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James J. Parsons
Arthur H. Robinson

Biographical information supplied to the Committee by the candidates follows.

JAN O. M. BROEK, Ph.D.
Professor of Geography
University of Minnesota

Experience with AAG business:
Vice President, Councilor; chairman and member of various committees.

Experience in administration:
Assistant Secretary, Netherlands Institute of Housing and Town Planning, 1929; staff member Netherlands Railways, Division of International Freight Rates, 1934-36; Member, Board of Directors, Southeast Asia Institute, 1942-46; Assistant to the Chief, Economic Division, R. and A., Office of Strategic Services, 1945; Chairman, Department of Geography, University of Utrecht, 1946-48; Consultant, University of Indonesia, 1947; Chairman, Department of Geography, University of Minnesota, 1948-56; various university committees. Member editorial board Royal Netherlands Geographical Society, 1946-49, and (Netherlands) *Journal for Economic and Social Geography*, 1947 –.

Fields of geographic interest:
Human geography and development of geographic thought; regionally, Southeast Asia.

Nature and extent of research:
Some books and many articles and reviews dealing with social, cultural, and economic geography, especially on Southeast Asia; geographic methodology.

FRED B. KNIFFEN, Ph.D.
Professor and Head
Department of Geography and Anthropology
Louisiana State University

Experience with AAG business:
Councilor; Chairman, Southwestern Division; chairman and member of various committees; Editorial Board of the *Annals*.
Experience in administration:
Chairman, Southwestern Division; head of academic department; Chairman, ONR-NRC Committee; director of field camp for four summers.
Fields of geographic interest:
Cultural and historical geography; Anglo-America.

GILBERT F. WHITE, Ph.D.
Professor of Geography
University of Chicago

Experience with AAG business:
Member of committees on finance, honors, program, monographs, and education.
Experience in administration:
Chairman of department, University of Chicago; President, Haverford College; Secretary of Land and Water Committees, National Resources Planning Board.
Nature and extent of research:
Natural resources management and conservation; flood plain occupance; arid lands.

MEREDITH F. BURRILL, Ph.D.
Director, Office of Geography
Department of the Interior

Experience with AAG business:
Chairman, Middle Atlantic Division, 1952; Editor, *The Professional Geographer*, 1954-57; Chairman, Local Arrangements Committee, 1943 and 1952; member of Nominating Committee, 1949; Chairman, Honors Committee, 1952; member of Committee on American Geography, 1948-53, Chairman, ASPG Amalgamation Policy

Committee during merger with AAG; member of Committee on Central Office, 1952-53; member of Publications Committee, 1954-57.

Administrative and executive experience:

Administrative head of research staff and executive secretary of interdepartmental board, under various names and titles, working on geographic name standardization, since 1943; Secretary-General, III Pan American Consultation on Geography, 1952; Special Events Chairman, XVII International Geographical Congress, 1952; AAAS Vice-President for Section E, 1953, and member of Bylaws Revision Committee, 1955; President, American Name Society, 1955; Vice Chairman, National Research Council Committee on Geography, Advisory to the Office of Naval Research from its inception in 1949 to 1952; Chairman of Geography Section, Southwest Social Science Association, 1937-38; President, Oklahoma A. & M. Chapter of A.A.U.P, 1939; Secretary, Social Science Research Council of Oklahoma A. & M. College, 1937-40; President, Oklahoma A. & M. Chapter, Pi Gamma Mu, 1932-33.

Nature and extent of research:

Initially organized and have directed a research program combining geography and linguistics that has provided the basis for some millions of standardized geographic names; investigations of problems in international standardization of geographic names have contributed to a considerable degree of international agreement; current studies of the distribution and connotation of generic terms in geographic names have up to now produced distribution maps of more than 2,000 terms, a compilation of definitions of these terms appearing in about 100 dictionaries and glossaries, and new light on basic problems of geographic terminology. Previous research dealt with land classification, natural resources, urban geography, the geography of manufacturing, the development of cultural geography, climatology, and the philosophy of geography.

ROBERT D. CAMPBELL, Ph.D.
Professor and Chairman
Department of Geography
The George Washington University

Experience with AAG business:

Chairman, Middle Atlantic Division, 1948.

Administrative and executive experience:

Chairman of Department since 1947; Principal Investigator on four supported research projects in period 1949 to present; chairman or member of a number of faculty committees.

Nature and extent of research:

Directed interdisciplinary group research on two logistics studies (one Navy, one Army), one operational study (Army), and one intelligence study (Army); current personal research on national character structure.

WILLIAM APPLEBAUM, A.B.
Visiting Consultant on Food Distribution
Graduate School of Business Administration
Harvard University

Experience with AAG business:

Member of Honors Committee, 1955-56; member of Publications Review Committee, 1955-57.

Experience as spokesman for a group:

American Marketing Association: Editorial Board, *The Journal of Marketing*, 1943-44; General Chairman, Spring Conference, 1946; President, New England Chapter, 1946-47; Director, 1956-58; member, Publications Policy and Review Board, 1956-58; Chairman, 1958-59. Member, Deciduous Fruit and Tree Nuts Research and Marketing Advisory Committee, U. S. Dept. of Agriculture, 1950-55; member, Agricultural Research Policy Committee, U. S. Dept. of Agriculture, 1958—. Director, Super Market Institute, 1952-55. U.S. Delegate, 5th General Assembly, Pan American Institute of Geography and History, Chile, 1950.

Experience on working committees:

Delegate, International Conference(s), Cooperative Institute Green Meadow Foundation, Switzerland, 1954 and 1955. Consultant, Research and Development Board, 1948-52. Chairman, Committee on Careers in Geography, National Research Council and Association of American Geographers, 1950-54. Chairman, Research Advisory Committee, Super Market Institute, 1952-53. Member, Committee on Geography, Advisory to the Office of Naval Research, National Academy of Sciences and National Research Council, Division of Earth Sciences, 1958—.

Other experience:

The Kroger Co., Cincinnati: Market Research Analyst, 1933-35; Chief, Market Research Dept., 1935-38. Stop & Shop, Inc., Boston: Director, Marketing Research Dept.,

1938-42 and 1945-47; Director of Planning and Coordination, 1948; Assistant General Manager, 1949-53; Director, since 1949. Marketing Consultant, since 1954; also Visiting Consultant on Food Distribution, Harvard Graduate School of Business Administration, since 1954. Office of Strategic Services, Research and Analysis Branch: Deputy Chief, Geography Division, 1942-43; Special Assistant to Branch Director, 1943-44; Executive Officer of Branch, 1944-45.

Fields of geographic interest:

Economic geography, especially marketing geography; urban geography.

Nature and extent of research:

Food distribution, marketing geography, urban geography, marketing research techniques; author of over forty articles and monographs plus several book reviews; editor of four volumes of proceedings.

WILLIAM L. GARRISON, Ph.D.
Professor of Geography
University of Washington

Experiences with AAG business:

Member of Editorial Board, the *Annals.*

Experience on working committees:

AAG census and data processing committees; member, Highway Research Board (NAS-NRC) economic analysis and electronics committees; member, NRC Committee on Geography, advisory to the Office of Naval Research.

Fields of geographic interest:

Economic geography; urban geography.

Nature and extent of research:

Investigations of highway transportation, and economic and urban geography. Emphasis on quantitative approaches.

JOHN FRASER HART, Ph.D.
Associate Professor of Geography
Indiana University

Experience with AAG business:

Chairman, East Lakes Division, 1957-58; Chairman, Bureau of the Census Advisory Committee, 1957-59; member, Program Committee, 1954-55; member, Foreign Research Grants Committee, 1953-57.

Experience as spokesman for a group, and on working committees:

Chairman, Geography-Geology Section, Indiana Academy of Science, 1957-58; Chairman, Geography Section, Indiana Academy of Social Sciences, 1957-58; President, Indiana University Chapter, American Association of University Professors, 1959-60; Acting Chairman, Geography Department, Indiana University, 1956-57; co-leader, I.G.U. Southeastern Excursion, 1952; chairman and member of various academic committees at Indiana University.

Fields of geographic interest:

Rural geography; population and settlement; British Isles; United States.

Nature and extent of research:

Articles on various aspects of rural areas in the British Isles and the United States, with particular emphasis on population and settlement.

JAMES J. PARSONS, Ph.D.
Professor of Geography
University of California, Berkeley

Experience with AAG business:

Chairman, Program Committee, 1958; member, Editorial Board, 1958-59.

Experience as spokesman for a group, and on working committees:

Supervisor, ONR Caribbean Field Studies project, 1957; member of Board of Editors, *University of California Publications in Geography* and *Ibero-Americana;* member of Advisory Board, *Hispanic America Historical Review;* member of Advisory Board, Pan American Institute of Geography and History, 1954-58; President, Association of Pacific Coast Geographers, 1953-54.

Fields of geographic interest:

Latin America; the tropics, especially the Caribbean; economic geography; Iberian Peninsula.

ARTHUR H. ROBINSON, Ph.D.
Professor of Geography
University of Wisconsin

Experience with AAG business:

Member of various committees since 1945.

Experience as spokesman for a group:

Chief, Map Division, OSS, 1942-46; Chairman, Department of Geography, University of Wisconsin, 1954-58.

Nature and extent of research:

Investigation of several aspects of cartography, both as a research technique and as a communication medium.

Clarence F. Jones, Chairman
AAG Nominating Committee

COMMITTEES

EXECUTIVE COMMITTEE

The Executive Committee of the AAG Council met at the Library of Congress on November 14 and 15, 1959. All members were present and a summary of their deliberations and recommendations follows.

1. Consideration was given to inviting some Russian geographers to attend the AAG meeting in Dallas. This would be a step toward activating the proposal for an exchange of a limited number of American and Russian geographers, as recommended by the AAG Council at Pittsburgh and financially supported by the National Science Foundation. The Secretary was asked to determine whether such a proposal would receive government approval and what responsibilities or obligations would devolve upon the Association.

2. Plans were approved to appoint the chairman of the Resolutions Committee well in advance of the Dallas meeting, and to publish in the Program appropriate acknowledgment to contributors of materials and services for the annual meeting.

3. A merger of the New York Metropolitan and New York-Ontario Divisions into a New York-New Jersey Division may be effected at the annual meeting in Dallas if all groups concerned are in agreement.

4. The Secretary was asked to determine, through a survey of the principal geography departments in the United States, how many students might take a special Graduate Record Examination in Geography if arrangements could be made for the Educational Testing Service at Princeton to develop one.

5. A revision of the *Handbook-Directory* published in 1956 was authorized for release as one issue of *The Professional Geographer* in 1960.

6. In connection with the XIXth International Geographical Congress it was agreed that: (a) The special issue of the *Annals* for distribution at Stockholm be limited to suitable papers submitted to the Editor before January 15, 1960 as announced in the November, 1959 issue of *The Professional Geographer*. (b) The U. S. National Committee for the IGU be asked to seek funds from a variety of sources to publish a volume containing all papers presented at the Congress by geographers from the United States if such a volume is desired. (c) Correspondence be directed to the principal geography departments in the U. S. to be certain that all qualified geographers be fully informed about the AAG Participation Fellowships for the members under 36 years of age as described in the May, 1959 issue of *The Professional Geographer*. (d) President-elect, Jan Broek, should prepare, for delivery in an appropriate manner, suitable greetings from the AAG to the Congress. (e) An alphabetical list of some 70 geographers who have requested financial assistance for travel to Stockholm be submitted by mail to the full Council for ranking in priority sequence. The list would include titles of proposed papers, connections of the individuals with Commissions or Section Meetings, and notes pertaining to any special qualifications of the applicants.

7. An *ad hoc* Committee on Chinese Geographical Literature was established to draft a program for making such literature available to U. S. geographers. Dr. Kitigawa of the National Science Foundation and Dr. Hsieh of Catholic University were invited to attend the discussion of related problems. The majority favored review type articles, with full translation on a highly selective basis and publication in established journals, such as the *Annals* or *The Professional Geographer* rather than in a new periodical.

8. To standardize payment of allotments to Divisions it was agreed that payments should be based upon membership as of March 1 and that membership lists should be mailed to each Division chairman between March 1 and 10 annually, with a supplementary list of new members being sent out quarterly.

9. A request for additional funds (25 cents per member) from the Middle Atlantic Division was approved after careful consideration of the justification.

10. Dr. Marion E. Marts was confirmed as Review Editor for the *Annals* beginning January 1, 1960. Appreciation was expressed for the excellent work done in recent years by Dr. Norton Ginsburg, who asked to be relieved of the editorship in view of other responsibilities.

11. Dr. Phyllis R. Griess of The Pennsylvania State University was confirmed as Editor of *The Professional Geographer* for three years beginning in January, 1960.

12. The Treasurer indicated that recent receipts from the sale of publications and early dues payments were bringing expenses and income figures for this calendar year closer to balancing than had seemed likely a few months ago. The Executive Committee agreed that despite the desirability of attempting to increase financial reserves through investment, the Treasurer should work toward a 3:1 ratio between investments in common stocks and liquid assets instead of the much higher current ratio.

13. Membership of the Program Committee for the annual meeting at East Lansing August 28 - September 1, 1961 was established in order to permit the members to begin their work during the Dallas meeting on April 18 - 21.

14. Membership of a President's Committee on Advancement of the Association was established to include regularly the current President and the preceding six Presidents and two Secretaries of the AAG.

15. A new category of Institutional Membership was tentatively agreed upon with dues at $25.00 per year.

Arch C. Gerlach, Secretary

TEMPORARY PROGRAM COMMITTEE

The Council of the Association has appointed a Temporary Program Committee to formulate and recommend general rules and regulations to be used in planning programs for the annual meetings. The Committee is composed of Alfred H. Meyer, Valparaiso University; Andrew H. Clark, University of Wisconsin; Henry M. Kendall, Miami University; George B. Cressey, Syracuse University; and E. Willard Miller, The Pennsylvania State University, Chairman.

The Committee would like to have an expression from the membership regarding the type of programs that are desired. The following are some of the topics that are now being considered: What should be the criteria for selecting the place for the annual AAG meeting? What is the best time of the year for the meeting? What should be the function of the program committee? What type of program should be developed? What place should invited and uninvited papers play in the program? What type of symposia or panel discussions should be developed? What other types of professional functions should be organized? What is the place of field trips at the annual meetings? Should a *Proceedings* be developed for the purpose of publishing papers presented at annual meetings?

Prior to February 15, 1960, please send your comments on the procedures to be followed in planning annual programs to: E. Willard Miller, Department of Geography, The Pennsylvania State University, University Park, Pennsylvania.

REGIONAL DIVISIONS

EAST LAKES DIVISION

The East Lakes Division of the AAG, and by invitation the West Lakes Division, met on the campus of Valparaiso University on October 2 - 3, 1959. Ninety-four were in attendance in addition to the local staff, representing 17 institutions and three planning agencies. The national organization was represented by President Paul Siple and Vice President Jan Broek.

The general theme of the sessions was *A Dynamic and Functional Geography.* Two major sessions were held on Friday: an afternoon symposium, *Closing the Gap Between Geography and Education,* and an evening symposium, *Closing the Gap Between Geography and Community and Regional Planning.* Panelists at the afternoon session included Herbert Gross, Fraser Hart, and Lyle Fletcher; and at the evening session Elmer Hess, Noland Heiden, Raymond Lee, and Robert Stapleton.

On Saturday morning a field trip was conducted into the Lake Michigan beach-dune area under the leadership of Erwin Buls. Attention was focused upon the proposed Burns Ditch, Indiana harbor.

Extensive exhibits were a feature of the meeting. Alfred Meyer was in charge of the program and local arrangements.

GREAT PLAINS – ROCKY MOUNTAINS DIVISION

The 1959 annual meeting of the Great Plains-Rocky Mountains Division of the

AAG was held October 16 and 17 in Colorado. Clark Crain, University of Denver, was Chairman of the program and, with the cooperation and hospitality of the members of the Department of Geography of the United States Air Force Academy, the meeting was headquartered at the Officers' Club at the Air Academy. Lee Burcham and Lew Brown of the Academy Geography Department staff were responsible for arrangements for a dinner meeting at the Officers' Club; and Wiley Baxter, Chairman of the Geography Department at the Academy, provided a most interesting tour of the Academic Building and grounds of the Academy, as well as an informative briefing on the academic program.

At the dinner meeting on the night of October 16 David Simonett, University of Kansas, presided; and Leslie Hewes, University of Nebraska, gave the Presidential address. Dr. Hewes spoke on his recent Fulbright experience in Austria and used kodachrome slides to illustrate his talk. A total of 53 was in attendance.

On October 17 a field trip caravan, consisting of seven carloads and led by Clark Crain and Larry Herold, University of Denver, toured nearby territory.

Next year's meeting will be held at Hays, Kansas, under the program chairmanship of R. P. Marple. Clark Crain will be President during the coming year and will represent the region on the National Council.

SOUTHEASTERN DIVISION

The Southeastern Division of the AAG met in Gulfport, Mississippi, November 22-24. Mississippi State College and the University of Alabama were hosts of the Division. Attendance numbered between 80 and 100.

The program consisted of 26 papers, largely dealing with the Southeast. A half-day field trip included a visit to the Ingalls Shipyards and a drive through the seafood plants area.

Officers elected were: Chairman, Dr. William Pierson, University of Florida; and Treasurer, Professor Edward Baldwin (re-elected), Middle Tennessee College. Vice Chairman Dr. Paul Sisco and Secretary Dr. John R. Dunkle will carry over another year in their two-year terms.

AAG President Dr. Paul Siple was guest of the Division and delivered the banquet address on the subject, *Geographic Challenges.*

Next meeting will be held at the University of Georgia during the first three days of Thanksgiving week, 1960.

NOTE FROM THE EDITOR

The January, 1960 issue of *The Professional Geographer* is appearing in a new format, necessitated by the change in editors. The type of printing facilities that was used in Washington, D. C. is unavailable in University Park. The change from offset to letterpress reproduction is made, however, without additional cost. The slightly larger page size and the two-column style are adopted in order to permit publication of more material without an equivalent increase in printing costs. However, the type size that previously was used is retained. An abbreviated list of the contents of each issue is being placed on the front cover to facilitate easy reference.

The Editor extends an invitation to members of the Association of American Geographers to submit materials for publication in *The Professional Geographer.* In order to guide authors, suggestions for preparation of manuscript are given on the page following the list of contents. Contributors will be able to obtain reprints of their articles. Pricing of reprints will follow standard practices.

The new Editor wishes to express her sincere thanks to Miss Evelyn L. Pruitt, former Editor of *The Professional Geographer;* Dr. Arch C. Gerlach, AAG Secretary; Dr. Henry M. Kendall, Chairman of the AAG Publications Committee; Mrs. Yetta G. Sternfeld and Miss Joan Weisman of the AAG Central Office staff; members of the geography department of The Pennsylvania State University; and personnel at Commercial Printing, Inc., of State College, Pa. for the assistance they have most generously given during the change in editorship.

Phyllis R. Griess, Editor

1960 ANNUAL MEETING

PROGRESS REPORT

In previous issues of *The Professional Geographer* (July 1959, pp. 20-21; and September 1959, pp. 21-23) you have read about the general plans for the 56th Annual Meeting which will be held at the Statler Hilton Hotel in Dallas (April 18 - 21), the fundamental information in regard to the four field trips which will be held during and immediately following the meeting, and the call for papers for the Dallas meeting. Nothing additional was published in the November number and only brief notes appear in this issue, but the March 1960 *Professional Geographer* which will be published more than a month before the convention will contain the preliminary program, information about hotels and motels in the Dallas area, data on transportation to Dallas, and such other information which the Local Arrangements Committee thinks essential for participants to have before arrival.

In addition, the annual announcements which will be mailed in January from the Washington office of the Association will include a pre-registration form together with seven individual cards that can be used by members to transact their convention business in advance. This form and the several cards are self-explanatory. The Local Arrangements Committee believes that this will speed up the preliminary work of the Convention. The January "mailing piece" will also include a reservation blank for the Statler Hilton Hotel (to be mailed directly to the hotel), and information about the other hotels and motels in the Dallas area.

Edwin J. Foscue, Chairman
Local Arrangements Committee

DALLAS FIELD TRIPS

Detailed information concerning each of the field trips to be held during the Dallas meeting in April will be mailed in January to the membership of the Association.

An urban field trip in Dallas will be held on the afternoon of Sunday, April 17, and will be repeated on the afternoon of Wednesday, April 20. The charge will be $2.00. On Monday, April 18, a scenic field trip to the Arbuckle Mountains and southern Oklahoma has been arranged. The charge will be $9.00 per person. On April 21 and 22, a trip to the scenic Texas Hill Country and San Antonio with an overnight stay at the Villa Camille, a comfortable inn at Hunt near Kerrville on the Edwards Plateau, has been scheduled. The price of this trip will be $28.50 per person. A three-day industrial field trip to Houston and the Gulf Coast has been organized for April 21, 22, and 23. The charge will be $37.50 per person.

The cost as quoted for all trips includes the cost of transportation, meals, and overnight accommodations (two to a room). Gratuities are not included.

It will be essential to have all who expect to take the Oklahoma, Central Texas Hill Country, and the Gulf Coast field trips reserve space one month in advance. Procedures for making reservations will be outlined in the material to be mailed to the membership in January.

Any questions concerning the field trips should be directed to Stanley Arbingast, Professor of Resources and Assistant Director, Bureau of Business Research, College of Business Administration, The University of Texas, Austin 12, Texas.

PERSPECTIVE ON THE NATURE OF GEOGRAPHY

Richard Hartshorne

201 pp., $5.00, 1959

Rand McNally and Company

P.O. Box 7600, Chicago 80, Ill.

ANNOUNCEMENTS AND REPORTS

THE FIFTH WORLD PETROLEUM CONGRESS: NEW YORK, 1959

Unlike its predecessors, this congress did not limit its deliberations to technical aspects of oil industry operations. With the admission of economic considerations Geography also made its debut. For this reason the word "geographic" appeared in many papers; however, "geographical," particularly in the sense of geographical distribution, would have sounded better to geographers. Material of interest to geographers was concentrated in Sections I (Geology), VIII (Transportation and Distribution), IX (Operating Research, Statistics, and Education), and in a few papers in Section II (Production) and X (Contribution of Atomic Energy). All papers mentioned herein are referred to by section and number. (Papers and abstracts, and the ensuing discussions, are published in full in *Papers and Proceedings of the Fifth World Petroleum Congress, New York, 1959*, Fifth World Petroleum Congress, 527 Madison Ave., New York, N. Y. Eleven volumes, $110.)

The increasing geographical separation of areas of crude oil production from areas of petroleum product consumption was demonstrated in VIII, 1, "The Role of Sea Transportation in the Petroleum Industry." Using the war-time T 2 tanker (16,000 tons; speed 14.6 knots) as common denominator for carrying capacity (thus a 26,000 ton tanker with a speed of 17 knots is regarded as 26,000 x 17 divided by 16,000 x 14.6, which equals 1.8 T 2 tankers in carrying capacity), the paper shows that 10.4 T 2 equivalents were required in 1938 to transport each million barrels of oil produced in the world; by 1958 this figure had increased to 15.8 T 2 equivalents. This technique, frequently used in the oil industry, should be adopted by geographers to obtain more satisfactory space-friction indices incorporating space and time elements. Applied to trade routes, these indices show a 1957 percentage utilization in terms of flow of tanker carrying capacities as follows:

U. S. Gulf/East Coast U. S.	9%
Latin America /U.S. & Canada	9
Middle East/U.S. & Canada	7
W. Hemisphere/Latin America	6
W. Hemisphere/Europe	12
Persian Gulf/Europe	25
E. Mediterranean/Europe	4
Persian Gulf/East of Suez	11
All others, including transshipments	17
	100%

As fast large tankers tend to be used on the long Persian Gulf/Europe route, tanker utilization is in fact less than data for actual quantities shipped indicate. These large tankers are more economical in terms of carrying capacity:

Vessel (Deadweight Tons)	Index of Cost of Oil Transport
16,000 (T 2)	100
19,000	90
30,000	63
45,000	51
70,000	43
85,000	40
100,000	38

The economies of the very large tankers (over 45,000 tons, which is the present planned maximum capacity of the Suez Canal) can be expected to have significant geographical repercussions. For example, the refineries of the Lower Delaware River (total capacity 900,000 barrels per day; the world's largest geographical concentration of refining capacity) cannot be reached by tankers larger than 50,000 tons (40′ draft). Discussion at the congress revealed that construction of a new offshore oil terminal to berth 100,000 ton and larger tankers near the mouth of the Delaware River is now planned. Construction of this terminal, together with submarine pipelines to the shore, storage tanks on shore, and a 90-mile pipeline to the refineries (upstream to Philadelphia, Pa.), is estimated to cost $50,000,000. Alternative deepening of the Delaware to Philadelphia, to accomodate 100,000 ton tankers, is estimated to cost at least $400,000,000. Paper VIII, 1 also recommended study of an offshore "monomooring system which would enable very large vessels to be moored by the bow to a platform or buoy for loading or discharging about which they would be free

to swing so as to lie with minimum weather stress." These platforms or buoys would be connected to land by means of submarine pipelines and would have the function of regular oil terminals. Thus, geographers may soon have to deal with a new category of offshore ports both near Middle Eastern oil fields and European refineries. Except for the Delaware region, where a more orthodox offshore terminal is being planned, there appears to be no need for additional offshore ports in the United States.

The economics of refinery locations were discussed in two papers (IX, 9 & 10). Using the categories of refinery locations established by the writer (Melamid, A., "Geographical Distribution of Refining Capacities," *Economic Geography*, Vol. 31, No. 2, April, 1955, pp. 168-178), the papers confirmed the continued trend of refining capacities to locate in areas of petroleum product consumption rather than of crude oil production. Despite this trend, it was noted that India (IX, 20) cannot expect to refine all of its requirements within its boundaries, for its demand for kerosene (lighting, cooking) and diesel oil exceeds substantially what can be obtained economically in the refining process without creating surpluses of other products. India, however, can be expected to double her commercial energy requirements during the next ten years. Unlike most other countries, the percentage of energy supplied by oil (14%) cannot be expected to increase. Coal, 80 per cent now, can be expected to supply 75 per cent of energy requirements in ten years. The balance will be supplied by water power (from 6% to 11%).

Three papers (IX, 3, 4, & 5, the last in French) made world-wide energy consumption forecasts. Due to varying assumptions the forecasts differ substantially. There appears to be, however, no doubt that energy consumption will more than double between now and 1975, and that the share of oil in overall energy consumption will rise from about 30 per cent to at least 40 per cent.

Atomic energy will make no impact on oil consumption before 1968 (X, 1). Thereafter it will be used mainly for electric power generation. As only 2.5 per cent of U.S. oil consumption is used in power stations, atomic energy production will have only limited repercussions on U.S. oil industry operations. In view of its high load factors, atomic power holds little promise for underdeveloped countries. However, Great Britain has a high density electricity grid system, so that large blocks of atomic energy converted into electricity can be fitted in at various strategic locations. Here mostly coal and relatively little oil will be replaced by atomic energy.

The economic geography of offshore oil production received much attention. In the Gulf of Mexico (I, 21; II, 1), depths of 200 feet of water are now regarded as the limit for commercial exploitation. About one-third of the wells are dry holes. Costs are high and a well in 65 feet of water with a depth of 10,000 to 11,000 feet will cost about $750,000. Under present conservation rules such a well is allowed to produce only 173 barrels per day. This is about twice the quantity that a similar well on land is allowed to produce, but due to the relation of costs and permitted yields, drilling activities have declined substantially in the Gulf of Mexico since 1957. Interesting is the legal use of space coordinates to regulate directional wells from the shore which may drill through the area of offshore wells. Proximity to areas of consumption should encourage the search for oil on the "Emerged and Submerged Atlantic Coastal Plain of the United States" (I, 22). The outlook appears favorable, for this plain may cover two basins that might have trapped oil. So far no information on depths and location of possible oil horizons onshore and offshore is available.

A paper on Oman (I, 14) suggests that the main mountain range of the area is not structurally connected to the Zagros Mountains of Iran. If this hypothesis is substantiated by further exploration, physical maps of southwestern Asia which usually indicate such a connection across the Straits of Hormuz will have to be redrawn. A new colored 1:2,500,000 geological map of Iran (available from Iran Oil Company, P.O.B. 1516, Teheran. Price: $15.) was introduced within the framework of a paper on the sedimentary basins of Iran (I, 17). Paper I, 16 (Israel) disclosed the existence of a buried trough near Askalon. The Heletz oil field is located on a horst within this trough, which may resemble the Suez graben on the other side of Sinai Penin-

sula. Gach Saran, Iran (I, 18) was described as probably the world's most prolific oil field in terms of both reserves and yields per well. Other papers described the oil potential of Germany (I, 9), Italy (I, 12 & 53), Turkey (I, 15), French Equatorial Africa (I, 30 in French), Argentina (I, 49), Brazil (I, 50 & 51), and the fascinating, if little productive, Vogelkop Peninsula of New Guinea (I, 52). A paper from the Soviet Union (II, 3) explained the recent growth of USSR oil production by the increased yield from wells (8 b/d in 1940; 79 b/d in 1958) without disclosing much additional information. A general paper on the "Outlook for Petroleum Exploration" (I, 23) showed in an interesting map-example from Wyoming the geographical spread of oil production with the introduction of new geoglogical concepts (pool structures in 1948 to stratigraphic traps in 1958).

"Optimum Routing of Gasoline Delivery Trucks" (VIII, 19), like industrial location problems, can be investigated by computers. Case studies, however, disclosed that skilled dispatchers can route trucks better than computers, provided the number of delivery points does not exceed 15. Due to the cumbersome nature of computer work and its cost, it appears that even for a larger number of delivery points humans can grasp problems of space more economically than machines. Petroleum Market Research (VIII, 20) suffers from difficulties in the geographical definition of market boundaries. Although geographers have not yet found solutions for this problem, the paper exhibited a sad lack of exchange of ideas between geographers and market researchers.

Geographers frequently complain about the flood of publications that they have to read in order to keep up in their fields. In the oil industry, a total of two million pertinent articles have now to be studied annually. In order to abstract and handle this flood "Information Research – A New Tool for the Oil Industry" (I, 15) has emerged as a new occupation. As much geographical information has to be handled by these researchers, this reviewer suggests training geographers in these techniques.

Alexander Melamid
New York University

GEOGRAPHICAL NOTES ON COMMUNIST CHINA

The following are abstracts from a report by Chu K'o-chen, Vice President of the Chinese Academy of Sciences, on survey work done under the Academy's direction in recent years which may interest the geographical profession generally. Supplementary news of recent date also are added. The source for all of these is the voluminous American Consulate General's translation series from the Chinese mainland press.

INFORMATION FROM PEKING KUANG-MING JIH-PAO, MARCH 4, 1959

The Chinese Academy of Sciences began its general survey work in 1951 when it carried out a survey of Tibet. In 1956 it formally set up the general survey committee. Since 1951, ten general survey teams have been organized. They include the survey teams enumerated below.

(1) Water and soil conservancy surveys in the middle reaches of the Yellow River, directed toward preventing the silting up of the San-men Gorge reservoir. The Yellow River Team surveyed some 350,000 sq. km. of land in Shan-hsi, Shen-hsi, Kansu and Inner Mongolia.

(2) Survey of tropical biological resources in southern Yun-nan, which determined that there were more than 200 types of plants in the area of value for exploitation, including plants for producing aromatic oils, tannin, fiber, oil, and medicinal herbs.

(3) Survey of tropical biological resources in Southeast China, including Kuang-tung, Kuang-hsi, and southern Fu-chien provinces. Preliminary results indicate that there are 130 kinds of animals and 537 kinds of plants with economic value. Of the plants, 37 per cent are suitable for medicinal use, and 11 kinds produce wild rubber. Areas suitable for rubber plants were selected.

(4) Survey of the Amur River, which is scheduled to be completed in 1960. Among other things, the survey team is determining the volume of flow in the upper and middle reaches, locating sites for building a stair-step system of dams in the upper and middle reaches, and surveying the geological and tectonic character of the Greater and Lesser Hsing-an mountains. Many mineral deposits have been located, and investigations are being made in the fields of forestry, soil, vegetation, and fishing resources.

(5) Survey of Hsin-chiang (Chinese Turkestan), also scheduled to be completed in 1960. Surveys have been made of the Irtish, Urungu, Manass, and Ili rivers in northern Hsin-chiang and the Khadil, Qurug, and Tarim rivers in southern Hsin-chiang, reestimating the water resources of the areas concerned. Extensive investigations were made of underground water supplies.

The Khadil River flows through Yen-chi into the Bagrach Kol, which suffers a loss through evaporation estimated at 1.6 billion cu. m. yearly. The survey recommended changing the course of the Khadil to flow by way of the Qurug River through the Kurla and Wei-li districts to provide additional irrigation water.

Geomorphologists have learned that, because the rate of sedimentation of the Tarim River is great and the river bed unstable, changes in its course bring about consequences very different from those described by scholars in the past. Geographers reportedly have found a new explanation for the glacial periods in the T'ien Shan.

(6) A general soil survey, especially of the Yellow and Yang-tzu river basins, was begun in 1956. In connection with this, NCNA-Peking, March 5, 1959, reported that the conversion of numerous small farms into large communal farms was preceded by a soil survey on a scale without parallel in China. In the flat North China Plain, which has few soil types, enormous farms for the cultivation of special crops are coming into existence. For example, the Tung-feng People's Commune, 200 km. south of Peking, which has finished its survey, is turning its 12,000 hectares of land into a dozen or more big farms. Soil surveys also are reported to have been completed by the communes in Kuang-tung and Kuei-chou provinces. The newly created farms here are smaller in size than those of the North China Plain since numerous soil types exist in the hilly south.

Hundreds of thousands of peasants and farm women have been trained by soil experts to conduct soil surveys and make chemical analyses. In Kuang-tung more than 100,000 people were trained to do the job. Soil maps were compiled with the help of soil experts, and the entire job was completed on all the farms in Kuang-tung in six months.

(7) Survey of the Tsaidam salt lake, began in 1957 and continued through 1958 (apparently still going on in 1959). Preliminary data show that this basin has an enormous deposit of common salt, and is also rich in potassium and other elements that in the future may make the Tsaidam one of the most important bases for China's chemical industry.

(8) Survey of Ch'ing-hai and Kan-su industrial, mineral, agricultural, and forestry resources and the distribution of "production power."

(9) Survey of sand control studies and their implementation in practical measures. The Sand Control Team, a section of the Ch'ing-hai and Kan-su survey, carried out a survey of the deserts in Inner Mongolia, Shen-hsi, former Ning-hsia, and Kan-su in the course of three years, collecting a large amount of scientific data.

(10) The general survey for moving water from the south to the north in Western China. The survey was begun in 1959 and involves the projected plan to divert water from the upper Yang-tzu tributaries in western Ssu-ch'uan to the upper Yellow River region, presumably via southwest Kan-su. This is one of the most ambitious schemes of the Chinese Communist planners and may be linked up with the "Grand Canal of the Northwest" now nearing completion in the southern Kan-su plateau.

The various branches of education participating in the surveys have collected materials in their respective fields, and prepared maps and drawings to depict land features, soils, vegetation, and hydrology at scales of 1:1,000,000 or 1:500,000, and, in key areas, at a scale of 1:200,000. In certain areas maps of regional geology and hydro-geology also have been prepared. Animal, insect, plant, and soil specimens numbering tens of thousands have been

collected. Many new species are said to have been discovered. This data provides a basis for the demarcation of China into natural regions, according to the report.

Among other things, the geologists have discovered a "rich supply of primary siderite in the compound mountain formation of the Permian period in Kuang-hsi, thus overthrowing the antiquated conclusion that there would not be any large iron deposit in the Permian formation. In the salt lake of the Tsaidam Basin, it has been discovered that there is a large deposit of potassium salt. The general belief of old that there would not be any deposit of potassium salt in a continental lake has thus been rejected, and the way for China to locate potassium fertilizer has thus been broadened."

INFORMATION FROM OTHER SOURCES

NCNA-English, Shen-yang, March 8, 1959. Liao-ning province in Manchuria has set up an extensive meteorological service network. The province now has 10 meteorological observatories, 54 weather stations, 1,391 posts, and 6,094 weather observation teams. More than 100,000 people are working in the meteorological services. In 1957 the figure was only 515 people. In 1959, the province reportedly established ten hydrological and meteorological stations in cities and counties along the sea coast.

NCNA-English, Urumchi, April 17, 1959. The first large-scale scientific survey of the 55 million hectares of desert in Hsin-chiang has started. The survey is to examine different types of deserts, the causes of their formation, the types of existing vegetation, climate, subterranean water, and the shifting of sand in desert areas. A campaign to bring under cultivation 530,000 hectares of the Gobi Desert this year also was started. The areas where this attempt is being made lie in the southern and western edges of the Dzungaria Basin and in the Tarim Basin.

NCNA-English, Lan-chou, April 20, 1959. An expedition of 3,000 people, led by scientists and organized into 10 units, will travel into the 4,500 meter heights of the Ch'i-lien mountains of the Kan-su Corridor where attempts will be made to melt glacier ice on a large scale for irrigation water. Men and airplanes will spread coal dust, burned grass, and wood coals on the ice to increase heat absorption. Strategic spots on the glacier also are to be blasted by bombing. The findings of three months' exploration and experiment showed that the area of glaciers on the mountains here totaled 1,300 sq. km. [sic] and the water stored amounted to 40,000 million cu. m. [?] Only one-fortieth of the water is melted naturally each year, mostly during the middle of summer. The area marked for artificial melting on this occasion covers 18 sq. km. in eight counties of the Kan-su Corridor. It is hoped that an estimated 23 million cu. m. of water will be melted to irrigate some 20,000 hectares of fertile farmland at a time when water is badly needed.

American Consulate General's Current Background Series, Numbers 554 and 581. These publications carry translations of very extensive changes in administrative areas announced by the Ministry of Internal Affairs during November and December, 1958, revising the administrative map of China. A previous listing of administrative areas is contained in the *Current Background Series,* Number 529, October 29, 1958. Most of the changes pertain to abolition of existing districts and transfer of district seats, or to incorporation of areas into municipalities and districts.

Herold J. Wiens
Yale University

THE FIRST INTERNATIONAL CONGRESS OF PHILOLOGISTS-MONGOLISTS IN ULAN BATOR

From September 1 - 8, 1959 there was convened in Ulan Bator, the capital of the Mongolian People's Republic, the First International Congress of Philologists-Mongolists. The Congress was organized and sponsored by the Mongolian Committee of Sciences and Higher Education, the republic's academy of sciences. Students of Mongolian language, history, and culture from all over the world were invited to participate.

The delegations from the USSR and the Chinese People's Republic were large and in addition there were scholars from North Korea, Poland, Czechoslovakia, Hungary, and East Germany. India and Japan were represented. However, the attendance of western scholars was light; many had been invited, but were unable to go for reasons various and sometimes obvious. Thus, there were to be seen in the conference room only the flags of Finland, Great Britain, the United States, and Canada besides those of the countries mentioned above. The writer represented both Canada and the University of Washington.

During the first week of the Congress the delegates met, almost daily, in the large white building of the Committee of Sciences and Higher Education, near Sukhe Bator Square, the "Red Square" of Ulan Bator. These daily meetings were well organized and administered. Papers were read and discussed, the official languages being Mongol, Russian, Chinese, English, and German; a real attempt was made to provide instantaneous translations of the texts of the papers and comments into the several languages.

Occasionally an afternoon would be left free in order that the delegates might visit some point of interest in Ulan Bator. The highlight of the afternoon excursions was a visit to Gandan, the Buddhist Monastery, to the west of the center of the city, spread out on a hill overlooking a sea of yurts and now blocks of new apartment houses. Gandan is probably the only Buddhist monastery functioning in the republic, but its activities are curtailed, if not directed, by the regime.

On the 10th of September, most of the delegates set out in a Soviet bus and in jeeps for an excursion to the country west of Ulan Bator. Paved roads are few in Mongolia, save in and around Ulan Bator, and our caravan bumped and jostled its way along dusty trails across the high steppe. Precipitation had been adequate this year and the pastures looked good. Everywhere there were large herds of fat sheep and goats, camels, horses, and cattle. Much of the time, the days were clear and warm. On other occasions the wind was cold, it rained, and, in the mountains, snowed. At night the air was always chilly while the skies were lit with a thousand stars.

Dashinchiling and Khudzhurt were our headquarters on the trip. Dashinchiling is a small regional center, about 300 km. due west of Ulan Bator. Although it boasts a post office and restaurant, Dashinchiling is a town consisting mostly of yurts. Khudzhurt lies about 150 km. to the southwest of Dashinchiling. It is a spa, settled in a valley in the Khangai piedmont. Around its mineral waters has grown up a pleasant village, again mainly of yurts. From these two points we visited ancient ruins dating back to the Kitan and Turkic period. Another day-long journey took us up along the Orkhon River, to its impressive falls. The highlight of the entire excursion, however, was the visit to Erdeni-Tsu and, nearby, the site of Karakorum. Erdeni-Tsu, one of the oldest Buddhist monasteries in all Mongolia, was almost levelled in the general onslaught against religion in 1938. Most of its buildings, dating to the 17th century, were destroyed. Today, however, some reconstruction is taking place and it seems likely that Erdeni-Tsu will be restored as a museum of Buddhist art and architecture in Mongolia.

A short distance beyond the walls of the monastery is the site of the once great city of the Mongols. Nothing but a few stones remains today. Proclaimed capital of the far-flung Mongol empire in 1235, Karakorum survived slightly more than a hundred years. Centuries later the stones of Karakorum were used to build Erdeni-Tsu.

Not far from this fabulous site, is a modern goskhoz, or state farm, called Karakorum. It is one of a number of new farms established by the government on virgin and idle lands in an attempt to settle the Mongols. This year, the Karakorum State Farm had 20,000 ha. of chestnut brown soil under cultivation. Wheat is the basic crop, although some corn for silage is also grown. According to the government's three-year plan, an additional 10,000 ha. are to be ploughed in 1960. Under construction, using imported Chinese labor, are a series of canals, in length 400 km., which will carry the waters of the Orkhon to the farm. Ultimately, 10,000 ha. will be irrigated. This year, according to the farm's agronomist, the farm obtained 16 centners of wheat per ha. (presumably biological yield) as against 12 centners last year, and 10 centners the previous year.

However, a close inspection showed the grain to be small and frequently shrivelled. Both local and imported Soviet wheats are grown, but none of the durum variety.

During the course of my stay in Ulan Bator, I had an opportunity to visit Choibalsan University and meet the local geographers. The faculty of geography was established in 1956 as part of the division of natural sciences. On the staff are three full-time geographers. For the most part their training was obtained at the Pedagogical Institute in Ulan Bator, but it seems that Professor E. Murzaev, of the Institute of Geography of the Soviet Academy of Sciences, was responsible for guiding their study when he was in Mongolia several years ago. Professor Murzaev is a physical geographer who knows Mongolia well.

The current four-year program of study at Choibalsan University places considerable emphasis on physical geography. However, there are courses on the economic geography of foreign countries and on political economy. This year (1959-1960), 120 students are enrolled in geography: 25 are in the first year; 36 in the second; 39 in the third; and 20 in the fourth. Presumably, graduates go, or will go, to the USSR for advanced training.

The only geography text available to me, which I purchased, is one on the physical geography of Mongolia by the Mongol geographer, Tsegmid, a rather elementary book reminiscent of Murzaev's physical geography of Mongolia. I had no opportunity to see the library. However, it is probable that the Mongols rely heavily on Soviet texts for teaching purposes, since they have few of their own.

Douglas Jackson
University of Washington

NOTES ON A RECONNAISSANCE TRIP TO THE BRISTLECONE PINE FOREST OF THE WHITE MOUNTAINS, CALIFORNIA

On May 15 and 16, 1959 the authors visited the bristlecone pine area, a 28,000-acre portion of the Inyo National Forest in the White Mountains of California, for the purpose of investigating the forest described by the late Edmund Schulman in the March, 1958 *National Geographic Magazine* ("Bristcone Pine, Oldest Known Living Thing").

Bristlecone pine (*Pinus aristata*) is a timberline tree found at higher elevations in several southwestern states, although nowhere else has it been found to reach the ages attained in the White Mountains of California. Here, in what is probably a Dsc climate, the tree grows principally on a calcareous soil derived from a dolomitic limestone. The line separating the area of coniferous woodland from that of highland sage and grass is a sharp one and obviously governed by edaphic factors. Billings and Thompson (Billings, W. D. and Thompson, J. H., "Composition of a Stand of Old Bristlecone Pines in the White Mountains of California," *Ecology*, Vol. 38, January, 1957, pp. 158-160.) have suggested that more frequent fires on the sage which covers the siliceous rock layers have eliminated tree growth there. The authors noted, however, that fire scars and charred trunks and branches are present in the bristlecone forests themselves, showing that these forests have had a considerable fire history as well.

It appeared to the authors that the deeper weathering of the limestone layers is of greater significance. In a pit dug by the Forest Service in the limestone area, weathered rock material was visible to a depth of perhaps six feet. The indurated sandstones and shales of Cambrian and pre-Cambrian ages, which cover much of the area to the west of the bristlecone pine forest, apparently do not weather to such great depths. In an area where the bulk of the precipitation occurs in the form of winter snow, the importance of adequate storage of soil moisture to induce tree growth is apparent.

The bristlecone pine is indeed impressive. Its gnarled branches and dead trunk sections hint at its tremendous age. In spite of the obvious signs of death and decay found everywhere in the area, the bristlecone pine is reproducing itself for trees of all ages are to be found in the

more favorable situations. Perhaps if the White Mountains had not been so isolated and so relatively unattractive, the bristlecone pine area would have been greatly modified by man long ago. As it is, this remains a rather primitive wilderness area to which only a few artists, scientists, and nature lovers find their way. Although the White Mountains lack the physical attributes of the Sierra, they are indeed noteworthy for upon their slopes lie "the world's oldest living things."

Robert W. Durrenberger
San Fernando Valley State College

Paul D. Kilburn
Principia College

MEMBERSHIP IN THE EUROPEAN ECONOMIC COMMUNITY

The purpose of this contribution is to publicize a list of the countries and territories associated with the European Economic Community (E.E.C. or "Common Market"). The writer wishes to thank Dr. Helmut Allardt, Director General of the E.E.C. Division Overseas Countries and Territories, for his assistance in compiling the list.

PRESENT MEMBERS AND ASSOCIATED TERRITORIES

Belgium
France
Germany (Federal Republic)
Italy
Luxembourg
Netherlands

Algeria

French Guiana
Guadeloupe
Martinique
Reunion

Comoro Islands
French Polynesia
French Somaliland
New Caledonia and Dependencies
Saint Pierre and Miquelon
Southern and Antarctic Territories

Central African Republic
(Ubangi-Shari)
Chad
Republic of the Congo
(Middle Congo)
Dahomey
Gaboon
Ivory Coast
Malagash Republic (Madagascar)
Mauritania
Republic of Niger
Senegal
Sudanese Republic (French Sudan)
Voltaic Republic (Upper Volta)

Cameroun (French Cameroons)
Togo (French Togoland)

Belgian Congo and Ruanda-Urundi

Netherlands New Guinea

Somalia (Italian Somaliland)

CURRENTLY NEGOTIATING FOR MEMBERSHIP OR ASSOCIATION

Greece
Turkey

Tunisia

ASSOCIATION CONTEMPLATED

Cambodia
Guinea
Laos
Morocco
Vietnam

Libya

Netherlands Antilles
Surinam

Andreas Grotewold
University of Missouri

NEWS FROM GEOGRAPHIC CENTERS

CHICAGO, UNIVERSITY OF

David Amiran, Professor of Geography at the Hebrew University of Jerusalem and until recently Director of the Research Council of Israel, will be Visiting Professor during the winter and spring quarters of 1960. He will teach the courses in physical geography in place of Wesley Calef.

Hermann Ugarte, Professor of Geography at the University of Arequipa, has been in residence during the autumn quarter of 1959 and during early 1960.

Harold M. Mayer and Brian J. L. Berry have undertaken a research program on central place theory under a grant from the Office of Naval Research.

A collection of essays on the geographic aspects of economic development is being edited by Norton Ginsburg and will be published as a Research Paper during the winter. The preparation of an atlas of economic development under his direction also is moving toward publication.

The Department has published as an Occasional Paper a *Translation of the Map Legends on the Economic Atlas of Japan*, edited by Norton Ginsburg and John D. Eyre.

The joint investigation of the Chiapas area by anthropologists, botanists, geographers (Philip L. Wagner, Louis Guzman, Winifred VanderWalker, and Melvin Marcus) and linguistics experts is the subject of a progress report, *Man in Nature*, which has been forwarded to the National Science Foundation.

The Department has undertaken an exploratory study, under the direction of Gilbert White, of rural occupance of flood plains in the United States with support from the U. S. Department of Agriculture. Office and field research over a three-year period is in prospect.

A thorough appraisal of the holdings of the University's Map Library has been in progress under the direction of Agnes Whitmarsh, Map Librarian. The holdings now amount to approximately 177,989 maps and 7,892 aerial photographs.

The most recent item in the Research Papers is *Field Study in American Geography* by Robert S. Platt, Number 61 in the Departmental series.

The Department is offering an exploratory course in its downtown College in which new developments of geographic knowledge are related to the practical problem of teaching geography at the high school level. Introduction by the Chicago Board of Education of a new course in World Geography has heightened interest in the subject among high school teachers. In connection with this change, Harold M. Mayer has given a series of radio and television talks on the same topic for the benefit of teachers in the school system.

On October 23 - 24, 1959 the University sponsored a conference on the teaching of world geography, world history, and foreign languages in the secondary schools, with special emphasis on treatment of non-Western cultures.

DE PAUL UNIVERSITY

Recent developments present encouraging prospects for the Department of Geography at De Paul. Enrollment in the seven courses offered in the autumn term shows an appreciable increase. One reason for this is that a special new program of the College of Commerce leading to a Certificate in Foreign Business includes Geography of World Affairs as a required course. It is being taught during the current term by Dr. James A. Hart.

Carl Lossau of the Research Division of the Chicago Planning Commission is a new addition to the part-time staff. Currently he is teaching economic geography at the University College, and is developing the Department's new course on the geography of the Chicago Metropolitan Region which will be offered next spring. Mr. Lossau, a specialist in the analysis of industrial locations, will direct urban field study.

Joseph Smutnik, now Research and Statistical Editor at Rand, McNally, Inc., will offer the Department's second new course in the spring quarter, Maps and Man, which is especially designed for social science majors.

Dr. George A. Rheumer, currently teaching part-time in the University College, was on the 1959 summer staff of the University of British Columbia at Vancouver and did field work in the interior of the province.

Dr. David Snyder, now a staff member at the University of Pennsylvania, offered a course on the geography of South America during the summer session at De Paul, and was a frequent participant on De Paul's daily television program, Pan American Classroom.

Currently, Dr. Richard J. Houk, Chairman of the Department, is doing a 13-week television series entitled Geography Behind the Headlines for WTTW, Chicago's educational channel. Much of the material presented is based on Dr. Houk's experiences last summer as leader of De Paul's first Round-the-World Tour. Dr. Houk will offer a course on Africa: a Continent in Transition in conjunction with an extensive study-tour of that continent in the summer of 1960.

MIAMI UNIVERSITY (OHIO)

The continued growth of geography at Miami is evidenced by the development of a six-man staff, steadily mounting undergraduate enrollments, the evolution of an M. A. program, and greatly expanded space and facilities.

In addition to the present campus departmental enrollment of 850, there are 150 students enrolled in geography in the off-campus extension centers. Twelve graduate students are candidates for the M.A. degree. Six of these are completing theses and six are presently involved in full-time course work. Of the latter, two are graduate teaching assistants and a third is a research assistant.

The physical growth of the university has recently permitted considerable expansion of the geography department and it now occupies over half of the second floor of Irvin Hall. Its facilities include a fully equipped cartography laboratory, seminar room, map library, and graduate students' room, as well as regular classrooms and individual staff offices.

The department chairman, Henry M. Kendall, is a member of the council of the AAG and is chairman of the Publications Committee. In addition to his regular duties on campus, he is a member of a three-man executive committee administering the College of Arts and Science until a new Dean is appointed. Professor Frank J. Monkhouse of the University of Southampton and Mr. Kendall are arranging an exchange for the academic year 1960-61. John L. Thompson is supervising the department's project of a *Physical and Economic Atlas of Ohio.* This volume has been in preparation for six years and its completion is scheduled for the spring of 1960. During the summer of 1960, Mr. Thompson will be teaching at the Ohio Conservation Laboratory at Camp Muskingham near Carrollton, Ohio. Malcolm A. Murray returned to the department in September after a year abroad as Fulbright exchange lecturer at the University of Southampton. His counterpart at Miami during this time was David C. Large who has since returned to Southampton. Mr. Murray is presently analyzing death rate variations in England and Wales. In connection with this project he intends to spend a portion of next summer in the United Kingdom. He is also planning to attend the IGU meetings in Stockholm. Byron E. Logan is presently engaged in research on the British automotive industry. During the summer of 1958, Mr. Logan received a fellowship to the Republic Steel Company's Economics in Action program held at Case Institute in Cleveland. Richard V. Smith continues his interest in Latin America and urban geography. He plans to spend the summer of 1960 doing field work in Mexico. The new staff member is Martin E. Dulgarian who is teaching courses in political geography and Asia. Mr. Dulgarian, who is a Ph.D. candidate at Michigan, is writing his dissertation on Ankara, Turkey.

OTHER CENTERS

News concerning geographic centers in the Pacific Coast Division of the AAG is contained in a 12-page *Newsletter* issued in November, 1959 by the Association of Pacific Coast Geographers, whose Secretary-Treasurer is Paul F. Griffin, Geography Department, Stanford University, Stanford, California.

Included in the *Newsletter* are items concerning the University of Arizona, University of British Columbia, Chico State College, Hartnell College, Long Beach State College, Stanford University, University of California at Los Angeles, University of Southern California, University of Idaho, Montana State University, Portland State College, University of Oregon, Central Washington College of Education, Univer-

sity of Washington, Washington State University, and Western Washington College of Education.

Also issued in November, 1959 is an 8-page *Directory of Members of the Association of Pacific Coast Geographers.*

PERSONAL NEWS

Ruth E. Baugh has returned to Pasadena after teaching for a year at the University of Nebraska.

James D. Blick was a technical writer for Hugh's Aircraft Semiconductor Division during the past summer.

Henry J. Bruman led a party of UCLA students on a tour of Colombia this past summer.

Wesley C. Calef is serving as Visiting Lecturer in Geography at Oxford University during 1959-60, and is a Visiting Fellow of Hertford College.

June S. Carroll presented a program, Contrasting Landscapes in Quebec, to the Los Angeles Geographical Society last April.

Glenn W. Cunningham spent eight weeks last summer traveling across the United States and Canada.

Franklin C. Erickson, Professor of Geography and Cartography and Chairman of the Geography Department at Boston University's College of Liberal Arts, has been named Acting Associate Dean of the College, for the 1959-60 academic year.

Norton S. Ginsburg has been appointed to the new Joint Committee on Contemporary China of the ACLS and the Social Science Research Council.

George Jobberns, Professor of Geography at the University of Canterbury (New Zealand) since 1942, will retire May 31, 1960.

H. Louis Kostanick is spending the summer and the fall semester in the USSR.

George M. McBride is teaching a UCLA extension course on Latin America. He taught at the University of Arizona last spring.

Duane F. Marble has accepted a position as Assistant Professor of Regional Science in the Department of Regional Science at the University of Pennsylvania, effective January, 1960.

Harold M. Mayer has been elected a Director of the Chicago Geographical Society.

Edwin S. Munger is spending the year in residence in the United States as a member of the American Universities Field Staff with his base at the University of Chicago. He continues as Executive Director of the African Universities Program.

Robert M. Newcomb spent the summer in Europe, primarily in Spain and Portugal. He also spent two weeks engaged in research in the British Museum.

William D. Pattison, following his interest in old transparent slide materials, visited several Midwestern and Eastern universities this summer to study their collections.

Donald A. Philipp spent four months visiting western European cities.

Robert S. Platt will be serving during the winter of 1960 as a Visiting Professor at Rollins College.

John W. Reith taught on the summer South Pacific cruise of the liner Mariposa.

William J. Smole is carrying on research in Chile for his doctorate at the University of Chicago.

Joseph E. Spencer and *W. Rodney Steiner* presented papers at the June meeting of the Association of Pacific Coast Geographers at San Diego State College.

Benjamin E. Thomas and family are spending the year at Entebbe, Uganda.

Gilbert F. White has been appointed a member of the Advisory Council of the National Outdoor Recreational Resources Review Commission.

OTHER ITEMS

NEW GEOGRAPHICAL JOURNAL

The Department of Geography, Victoria University of Wellington, New Zealand announces publication of a new geographical journal, *Pacific Viewpoint.* It will appear twice yearly, March and September, beginning March, 1960. Annual subscriptions are $3.00, including postage.

Pacific Viewpoint will specialize in the study of significant problems of the Asian

and Pacific areas, and will present a New Zealand and Pacific view on other topics and regions. Articles in related social and natural sciences also will be included.

ALBERT J. NYSTROM MEMORIAL FELLOWSHIP

The Albert J. Nystrom Memorial Fellowship for Advanced Study in Improving the Teaching of Geography in Elementary and Secondary Schools, established in memory of Albert J. Nystrom by the company which he founded, is intended to encourage students who seek to improve the teaching of geography in elementary and secondary schools. It is open to students in institutions in Canada and the United States having the following qualifications: (1) completion of all or most of the language and course requirements leading to a Doctor of Philosophy or Doctor of Education degree; and (2) an acceptable program for research and writing leading to a dissertation in some aspect of the teaching of geography. The recipient is expected to devote the fellowship period largely to research and writing of the dissertation. The fellowship award is $2,400 for one year and normally will not be granted to a given recipient for more than one year. The recipient may select the department of geography in which he wishes to pursue his advanced study provided the department of geography within the university selected offers opportunities for advanced study in the teaching of geography, or the school of education in cooperation with the department of geography offers such opportunities. The A. J. Nystrom Company stands ready to assist in publication of the research results if it seems suitable to do so.

Applications must be received by February 15, 1960. The award will be announced on March 15. Applicants should request the necessary application blanks from the Secretary, Association of American Geographers, 1785 Massachusetts Ave., N.W., Washington 6, D.C.

FELLOWSHIP FOR WOMAN GEOGRAPHER

For the year 1960-61 the Society of Woman Geographers is offering its Adelene Moffat Fellowship of $2,800 to a young woman for graduate work in geography at Columbia University. Application blanks may be obtained by writing to the Office of University Admissions and Financial Aid, 322 University Hall, Columbia University, New York 27, New York. Applications must be received on or before February 1, 1960.

CLARK UNIVERSITY EDITORIAL ASSISTANTSHIP

An Editorial Assistantship has been established in the Graduate School of Geography, Clark University. The new assistantship, covering tuition and a stipend of $600 for the school year, will involve assistance in editing *Economic Geography*. Ordinarily, the assistantship will be restricted to a candidate for the Ph.D. and will be based on evidence of writing and editing aptitude. For the current year the assistantship is held by Miss Aleta L. Grillot.

TRAVEL GRANTS TO THE IGC

The National Science Foundation will award individual grants to defray partial travel expenses for a limited number of American scientists participating in the International Geographical Congress, Stockholm, August 6 - 13, 1960.

An attempt will be made to have the grants approximate round-trip air tourist fare between the scientist's home institution and the location of the meeting.

Application blanks may be obtained from the National Science Foundation, Washington 25, D. C. *Completed application forms must be submitted by February 1, 1960.*

ANTARCTIC RESEARCH PROPOSALS

The National Science Foundation announces that final proposals for Antarctic research for the 1960-61 field season should be submitted by February 15, 1960 in order to allow the necessary time for scientific review and field planning.

Proposals should be addressed to the Director, National Science Foundation, Washington 25, D. C., Attn.: Antarctic Program Director.

Proposals will be accepted for aurora and airglow, biology and medical sciences, cosmic rays, geodesy and cartography, geology, geomagnetism, glaciology, gravity, ionospheric physics, meteorology, oceanography, seismology, and for such other research as may be pertinent to Antarctica. The staff of the Antarctic Research Program of the NSF will be happy to discuss

ideas for proposals informally prior to their final submission or to answer questions regarding the preparation of proposals and problems of research in the Antarctic.

INQUA

INQUA is an international association of sciences interested in various aspects of research on the Quarternary. Congresses include technical sections in each associated field and working commissions on special problems. The *Actes* of the Congress are published in the host country, and the official organ of the Association is *Quaternaria,* an annual. The next Congress will be in Poland in 1961 and serious consideration is being given to holding a Congress in the United States in 1965.

The AAG has been invited to nominate delegates to the Congress in Poland in 1961 and to appoint a representative to serve on an organizational committee to plan for an INQUA Congress in the United States in 1965. Geographers who are seriously concerned with special aspects of the Quaternary should notify the AAG Secretary of their qualifications, experience, and interest in the INQUA Congresses.

NEW AGS MEMBERSHIP CLASS

The American Geographical Society has announced a new class of membership, open to undergraduate and graduate college and university students.

The student memberships, renewable for two successive years, are at the annual rate of $5.00, which is less than half the regular rate of $12.50. Student members will enjoy full privileges, including use of the Society's library and map collection and subscriptions to two of the Society's publications: *Focus,* a six-page, illustrated folder published monthly except July and August; and the *Geographical Review,* a scientific quarterly.

Students interested in joining the AGS should consult the head of their geography department, who has been asked by the Society to initial the application forms of prospective student members. Students who are already members may take advantage of the new form of membership by writing directly to the Society at 156th Street and Broadway, New York 20, New York.

AAAS MONOGRAPH PRIZES

The American Academy of Arts and Sciences announces three $1,000 prizes to be awarded in 1960 to the authors of unpublished monographs, one each in the fields of the Humanities, the Social Sciences, and the Physical and Biological Sciences.

A Monograph is defined for the purposes of these awards as a "scholarly contribution to knowledge, too long for an article in a learned journal and too specialized for a general book." Recipients of these prizes will be expected to make their own arrangements for publication. The final date in 1960 for receipt of manuscripts by the committee on awards is October 1. Announcement of the awards will be made in December. Full details concerning these prizes may be secured on request by sending a stamped self-addressed envelope to the Committee on Monograph Prizes, American Academy of Arts and Sciences, 280 Newton Street, Brookline Station, Boston 46, Massachusetts.

The response to the Academy's program for 1959 has been very encouraging, dramatizing the difficulty of finding publishers for academic work of this length. There have been over five hundred entries in the competition. It is hoped that the program will stimulate publication of significant monographs in the fields of the Humanities, Social Sciences, and the Physical and Biological Sciences.

NEW DEPARTMENT OF GEOGRAPHY

A Department of Geography has been established under the Faculty of Letters and Culture in the Gadjah Mada University, Jogjakarta, Indonesia. A professorship has been created by the University which is now being occupied by Dr. M. Halim Khan, a Clark University trained Indian geographer. His services have been borrowed from the Aligarth Muslim University, India.

COMMUNICATIONS FROM READERS

PLEA FROM TAIWAN

My dear American Colleagues,

So far as I know, there are many American geographers interested in China and I believe there will be more of such persons. My study of Taiwan will soon be concluded and I think thirteen years is enough in the study of a small island. Our Manchuria study is chiefly a compiling work and the result of this study will be published as the *Atlas of Pre-War Manchuria*. Now our interest has gradually shifted to the mainland. This larger scale research work will be started with a study of the ancient Chinese geographical materials which will then be linked with the newest data of modern China.

We are now preparing a book entitled *The Development of Geographical Science in China*. It is intended as a part of the above-mentioned research work and as it has something to do with some American geographers, we hope they can cooperate with us in preparing it. One chapter of this book will be devoted to "foreign influences," and we want to include in it all those foreign geographers who had once been to China, their travelling routes (with dates and preferably, some rough travelling route maps), their works on China (with titles, the journals in which they appeared, and dates of their publication), and their birth places and dates of birth. In a word, the more detailed items they can provide, the better. I also hope those who had been to China twice can draw their travelling routes in different colors. All the drafts will be redrawn by the Office of Cartography of this institute.

We have collected a rather complete set of information concerning European geographers. Early this May, in response to an invitation, I attended the International Alexander von Humboldt Commemoration. After the meeting, I spent three months travelling in sixteen countries chiefly for the collection of such material. In order to have a complete collection of the information concerning Richthofen including the best picture of him, the completest catalogue of his works and the five huge volumes of China which are hardly available even in Germany, I visited Bonn thrice. . . . However, if I must run to visit each foreign geographer in this way, very likely this book will still remain unfinished at the close of my life. That is why I am sending this letter to you, hoping my colleagues in both Canada and the United States can give me help. I would especially appreciate your kindness if, in addition to an account of yourselves, you can provide me with some information about other geographers who had been of service to China. If you must charge for your information, I am glad to shoulder the sum you charge.

Cheng-siang Chen, Director
Fu-min Geographical Institute of
Economic Development
Taipei, Taiwan, China

HANDBOOK-DIRECTORY, 1956

Herman R. Friis

Editor-in-Chief

iv and 195 pp., $2.50, 1956

Central Office, Association of American Geographers
1785 Massachusetts Ave., N.W.
Washington 6, D.C.

NEW PUBLICATIONS

Atlas of Mean Daily Minimum Temperatures. SAMUEL VAN VALKENBURG, HENRY J. WARMAN, AND WILLIAM C. ROBISON. Technical Report EP-110. Quartermaster Research and Engineering Center, Environmental Protection Research Division. Natick, Massachusetts. May 1959. iv and 24 unpaginated maps, plus 2 page appendix.

This unclassified booklet is another in a growing series of publications on climate being produced or sponsored by the Natick group. It was prepared under contract at Clark University, with the specific objective of improving Army procedure in the issue of clothing and protective equipment to troops. A secondary result is to make available to geographers climatic maps of a type and degree of accuracy heretofore largely unavailable.

Maps are included for all continents except Antarctica, and show mean daily minimum temperatures during January, April, July, and October. Isotherms are plotted at 9 degrees F. intervals (5 degrees C.), and are based upon data from land stations only. The continent maps are reproduced at scales ranging from approximately 375 miles per inch to approximately 950 miles per inch. Major sources of climatic data used in preparing the atlas maps are included in the appendix.

GEORGE F. DEASY
The Pennsylvania State University

The Individuality of Portugal. DAN STANISLAWSKI. University of Texas Press. Austin, Texas. 1959. xvi and 248 pp. illust. $5.00.

The Republic of Portugal clings to the western edge of the Iberian Peninsula, between the Meseta and the sea. To the superficial observer it seems anomalous that it, like Northern Ireland, should remain to break the unity of an area defined with such apparent clarity by Nature. And so it has seemed on occasion to the rulers of Spain. Professor Stanislawski has set himself the task of examining the nature and origin of that individuality which has set Portugal apart from the rest of the peninsula.

The author surveys the structure, surface, and climate, the prehistory and the history of Portugal and of neighboring parts of the Meseta and Galicia. Despite a great deal of detail and an abundant documentation, the book is somewhat impressionistic. If one did not know that it derived from American practice and precedent, one might have said that it was French. This is not to belittle Professor Stanislawski's achievement; merely to emphasize that a study of the imprint of man through time upon the changing face of nature, based upon the changing human attitudes that we can never hope to understand fully, must have a quality of mysticism.

The author has gathered an impressive body of material on the evolving political framework and national consciousness of Portugal. He shows how it was separated physically from Galicia by the man-made desert-zone of the Minho River, and how a tract of relatively useless land, reinforced by river-gorges, grew into the Spanish-Portuguese cultural divide. One senses that he would like to be able to say that the cultural frontier exists because of a pre-existing physical barrier. He has, however, shown that many developments in this field have been contingent and unforeseen, and he is too wise to make the slick generalizations appropriate to the previous generation.

The book is excellently produced and has a number of good maps and photographs. One hopes that both the theme and its mode of presentation will induce others to seek more historical depth in their geographical presentations.

NORMAN J. G. POUNDS
Indiana University

Metropolitan Area and City Size Patterns of Manufacturing Industries, 1954. Area Trend Series, No. 4. Office of Area Development, U.S. Department of Commerce. Washington, D.C. June 1959. v and 86 pp.

This publication is designed to serve as a research tool for community development groups in urban and rural areas, and is based upon a special tabulation of the 1954 *U. S. Census of Manufactures*. The text was written by Dr. Lloyd D. Black. The publication consists of tables dealing with (1) distribution of manufacturing employment in each standard industrial classification industry, by metropolitan area and city size status; (2) distribution of manufacturing industries, by per cent of 1954 employment located in standard metropolitan areas; (3) distribution of manufacturing plants in each industry, by metropolitan area status and employment size; and (4) variations in manufacturing industry characteristics, by metropolitan area and city size status. A map of standard metropolitan areas in 1954, a summary analysis of the tables, and explanations of how to use the tables and how to update the 1954 data precede the tables.

Native Peoples of South America. JULIAN H. STEWARD AND LOUIS C. FARON. McGraw-Hill Book Co., Inc. 1959. xi and 481 pp. illust. $11.50.

This book is partly a general summary of the factual materials presented in the six large volumes of the *Handbook of South American Indians* to which has been added the results of more recent research, and partly an interpretive study of the evolution, and the *raison d'etre*, of the Indian cultures of South America and certain portions of Middle America.

Anyone interested in the cultural development of South America's aboriginal population will find a satisfying wealth of material in this book. The variety of subjects treated include the pre-Columbian history of the Indians and the status of South American Indian cultures at the time when Europeans first arrived in the area. The controversial subject of pre-European transoceanic influences on native cultures receives some support from the authors. Relationships between environment and both production and cultural achievements also are discussed. There is an extensive treatment of the central Andean irrigation civilizations, both prehistoric and historic. The chiefdoms of the circum-Caribbean area, eastern Bolivia, the northern Andes, and Central America are analyzed; and the cultures of the shifting agriculturalists of the Amazon rainforests, the farmers and pastoralists of the southern Andes, the inhabitants of the savannas, and the various groups of nomadic hunters and gatherers throughout the continent form still other portions of the book. The last chapter, which is entitled Retrospect and Prospect, deals with the impact of European civilization on that of the Indians, as well as future world influences.

The material in the book is clearly stated; the reader does not need to be an archeologist or an anthropologist in order to understand it. Maps (fewer than the geographer might wish for), photographs, and sketches add to the utility of the volume.

Pediments in Southeastern Arizona. YI-FU TUAN. University of California Publications in Geography, Vol. XIII. University of California Press. Berkeley and Los Angeles. 1959. vii and 163 pp. illust. $3.50.

So little is being written today by geographers in the field of physical geography, and especially geomorphology, that a study such as this is welcome indeed. It represents the latest in a series of attempts by geologists and geographers, dating back to W J McGee in 1896-97 and including A. C. Lawson, D. W. Johnson, Sidney Paige, W. M. Davis, Kirk Bryan, J. L. Rich, and others, to explain satisfactorily the formation and exhumation of pediments, i.e., gently sloping piedmont surfaces that cut across the rock formations of mountain ranges. Field observation and detailed mapping of a series of pediments in southeastern Arizona are employed by the author to test the relative merits of the various hypotheses.

The book is divided into three parts. Part I includes background materials. Part II, which treats in detail a large number of individual pediments, constitutes the bulk of the study. Part III summarizes the findings contained in the preceding section, and presents the author's theories as to the various origins of five major pediment types.

The study is a scholarly piece of work that will receive well deserved attention from those interested in the origin of landforms. The influence of the author's mentor,

John E. Kesseli, is evident throughout the book.

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World Climatic Data – Africa. FREDERICK L. WERNSTEDT. Privately printed. P. O. Box 457, State College, Penna. 1959. 105 pp. $4.00.

World Climatic Data – Africa is the first of a contemplated series of six volumes presenting country climatic data arranged by continents in a single, readily available source. The Africa volume contains station names, length of record, elevation, latitude, longitude, and average monthly and annual precipitation and temperature data for approximately 2,500 stations in Africa. Included are data for every country. Some data were especially computed for the volume. *World Climatic Data* should prove a useful reference source for departmental libraries, students of climatology, and interested individuals.

1959 Plant Location. PAUL E. NEEDHAM, ed. Simmons-Boardman Publishing Corp. New York. 1959. 330 pp. $15.00.

Although American industry has from its beginnings experienced continuous change in its locational pattern, the present period is one of the most dynamic. The factors which affect the rise of new industrial centers and the migration of factories from existing centers are often complicated and interrelated. Shifting markets, changing freight and power costs, the demand for new labor sources, and advancements in technology are but a few of the influences affecting plant location. As a consequence, the selection of a site for a new plant must be guided by a series of well-defined locational criteria.

This volume is a comprehensive reference source presenting information on the ten basic factors involved in industrial localization on a state-by-state basis. The data include information about markets, labor, raw materials, power and fuel, transportation, taxes and labor laws, finance, climate, industrial development, and general considerations.

The market data, presented by county units as revealed by the latest census, include size, trends, composition and median age of population; number, size, and increase of families; retail sales and bank deposits. The labor statistics reveal the employment structure of the state by counties, production workers, value added in manufacturing, and capital expenditures. The raw material section briefly outlines each state's mineral, forest, and water resources. All transportation companies are listed that operate within the state and the major cities served by each. The tax structure of the state and the revenue collected from each tax source are outlined. All U. S. commercial banks with resources of $100 million or more and all members of the American Industrial Council are listed with their addresses. General information includes educational, recreational, and health facilities, and newspapers and political data.

By use of this volume, the general areas favorable to the location of a particular industry can be ascertained. After the general area is outlined, sources are listed from which information can be obtained to locate the specific site of a plant. An important feature of the volume includes a Community Appraisal Guide listing hundreds of important questions which must be answered before a final plant site is selected. Short sections also describe the services offered by the U. S. Department of Commerce, Association of State Planning and Development Agencies, American Industrial Development Council, and the Society of Industrial Realtors in industrial plant location.

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ERRATUM:

Man in Malaya was written by B. W. HODDER, not HOLLER, as was stated in the announcement of this book in the November, 1959 issue of *The Professional Geographer.*